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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,450	12/21/2000	Anders Khullar	47253-00015USPX	1349

7590

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EXAMINER

WILLIAMS, LAWRENCE B

ART UNIT	PAPER NUMBER
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2634

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DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,450

Applicant(s)

KHULLAR ET AL.

Examiner

Lawrence B Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figure 2A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because

- a.) Applicant uses form and legal phraseology language throughout the abstract.
- b.) Applicant uses multiple paragraphes.
- c.) Examiner suggests applicant remove last line containing " Figure 2B should be published."

Correction is required. See MPEP § 608.01(b).

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a **single paragraph** on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "**means**" and "**said**," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 6, 7, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Marturano et al. (US Patent 5,430,743).

(1) With regard to claim 1, Marturano et al. discloses in Fig. 2, a mobile station adapted to be used in a radio communications system (col. 3, lines 15-17), said mobile station comprising: receiver means adapted to receive blocks of distorted information (col. 3, lines 43-46) bits at a first rate; first detecting means (214) adapted to detect information bits from said distorted information bits; second detecting means (220) adapted, when the quality of said received blocks of information bits is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means; and estimation means (222) adapted to estimate the quality of one or more of said received blocks of information bits and, based thereon, to determine whether to use said first or said second detecting means when detecting information bits (col. 4, lines 1-52).

(2) With regard to claim 2, Marturano et al. also discloses wherein said mobile station is adapted, when operated in a first mode in which said received blocks of information bits are received at said first rate and said first detecting means is used, and when said estimated quality is above a predetermined first threshold, to change to a second mode of operation in which said blocks of information bits are received at said first rate and said second detecting means is used (col. 4, lines 39-43).

(3) With regard to claim 6 inherits the limitations of claim 1, since Marturano et al. discloses the apparatuses inherently involved in the method of claim 6.

(4) With regard to claim 7, claim 7 inherits the limitations of claim 6. Furthermore, Marturano et al. also wherein said second detection is performed when said estimated quality is above a predetermined first threshold (col. 4, lines 39-43).

(5) With regard to claim 10, Marturano et al. discloses in Fig. 2, a communications system including at least one base station and at least one mobile station (col. 3, lines 15-17), wherein said base station is adapted to transmit blocks of information bits at a first rate to said mobile station via a communications link; said mobile station comprising receiver means adapted to, as a result of said transmission, receive said transmitted blocks of information bits as blocks of distorted information bits (col. 3, lines 43-46), and includes first detecting means (214) adapted to detect information bits from said distorted information bits; said mobile station further comprising: second detecting means (220) adapted, when the quality of said communication link is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means; and estimation means (222) adapted to

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estimate the quality of said communications link and, based thereon, to determine whether to use said first or said second detecting means when detecting information bits (col. 4, lines 1-52).

(6) With regard to claim 11, claim 11 inherits all limitations of claim 10. Furthermore, Marturano et al. also discloses wherein said mobile station is adapted to use said second detecting means when said estimated quality is above a predetermined first threshold (col. 4, lines 39-43).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, 5, 8, 9, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marturano et al. (US Patent 5,430,743) as applied to claims 2 and 10 above, and further in view of Kameda (US Patent 5, 526,399).

(1) With regard to claim 3, as noted above, Marturano et al. discloses all limitations of claim 2. Marturano et al. does not however disclose wherein said mobile station is adapted, when operated in said first mode or said second mode and when said estimated quality is above a predetermined second threshold, to change to a third mode of operation in which said blocks of information bits are received at a second rate higher than said first rate and said second detecting means is used.

However, Kameda discloses a data transmission system for a radio section adapted when operated in a first mode or a second mode and when the estimated quality is above a predetermined second threshold, to change to a third mode of operation in which said blocks of information bits are received at a second rate higher than the first rate (col. 3, line 27- col. 4, line 9).

One skilled in the art would have clearly recognized that a mobile station is adapted, when operated in said first mode or said second mode and when said estimated quality is above a predetermined second threshold, to change to a third mode of operation in which said blocks of information bits are received at a second rate higher than said first rate and said second detecting means is used is a well-known technique introduced in many references. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to apply the method as taught by Kameda to modify the invention of Marturano et al. to obtain better data utilization.

(2) With regard to claim 4, claim 4 inherits all limitations of claim 3. Furthermore, Kameda also discloses wherein said mobile station is adapted, when operated in said third mode and when said estimated quality is below a predetermined third threshold, to change to said second mode of operation (col. 3, line 27- col. 4, line 9).

(3) With regard to claim 5, Kameda also discloses in Fig. 1, (data content) a mobile station wherein said mobile station is adapted, when operated in said second mode or said third mode and when said estimated quality is below a predetermined fourth threshold, to change to said first mode of operation (col. 3, line 27- col. 4, line 9).

(4) With regard to claim 8, claim 8 inherits all limitations of claim 7. Furthermore, Kameda also discloses wherein when said blocks of information are received at said first rate and

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when said estimated quality is above a predetermined second threshold, said mobile station requests said base station to transmit said blocks of information at a second rate higher than said first rate (col. 3, line 27- col. 4, line 9).

(5) With regard to claim 9, claim 9 inherits all limitations of claim 8. Furthermore, Kameda also discloses wherein when said blocks of information are received at said second rate, and when said estimated quality is below a predetermined third threshold, said mobile station requests said base station to transmit said blocks of information at a third rate lower than said second rate (col. 3, line 27- col. 4, line 9).

(6) With regard to claim 12, claim 12 inherits all limitations of claims 3 and 10, above.

(7) With regard to claim 13, claim 13 inherits all limitations of claim 10. Furthermore, Kameda also discloses wherein said mobile station is adapted, when said blocks of information are received at a second rate and when said estimated quality is below a predetermined third threshold, to request said base station to transmit blocks of information at a first rate lower than said second rate (col. 3, line 27- col. 4, line 9).

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marturano et al. (US Patent 5,430,743) in combination with Kameda (US Patent 5, 526,399) as applied to claims 10-13 above, and further in view Gilbert et al. (US Patent 5,737,365).

As noted above, Marturano et al. discloses either alone or in combination with Kameda disclose all limitations of claims 10-13. They do not however explicitly disclose the wherein said system is a TDMA system, and said blocks of information are timeslots.

However, Gilbert et al. discloses a method and apparatus for determining a received signal quality estimate wherein the system is a TDMA system, and said blocks of information are timeslots (col. 4, lines 40-42).

One skilled in the art would have clearly recognized that a system adapted to transmit blocks of information wherein the system is a TDMA system, and said blocks of information are timeslots is a well-known technique introduced in many references. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to apply the method as taught by Gilbert et al. to modify the invention of Marturano et al. In combination with Kameda as a known method for determining signal quality compatible with encoding schemes having high-order constellations (background of the invention).

Conclusion

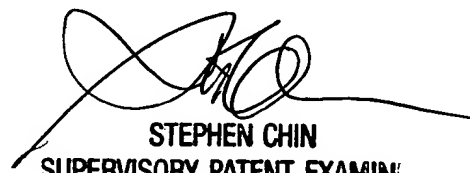
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 703-305-6969. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw
March 24, 2004



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